United States
Environmental Protection
Agency

Region 10
1200 Sixth Avenue
Seattle WA 98101

Alaska
Idaho
Oregon
Washington

COLSF site
8.2 V1

EPA

June 11, 1991

Reply To
Attn Of: HW-113

Dean Fowler, Project Manager
Utility Division
Spokane County Public Works
N. 811 Jefferson Street
Spokane, Washington 99260-0180

Re: Colbert Landfill Sample Results

Dear Mr. Dean Fowler:

Enclosed is a copy of the "Colbert Landfill, Split Sample Results," from samples taken on December 18 and 19, 1991. This data indicates that the pilot treatment system did not reduce the methylene chloride concentration to below 25 ug/l (ppb). Obviously, we will be looking at the design of the treatment process to reduce this number.

If you have any questions, give me a call.

Sincerely,

Neil E. Thompson
Project Manager

Enclosure

cc: Kuntz, Ecology
Beard, Landeau

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ecology and environment, inc.

101 YESLER WAY, SEATTLE, WASHINGTON, 98104, TEL. 206/624-9537

International Specialists in the Environment

MEMORANDUM

DATE: May 31, 1991

TO: [illegible] Thompson, HWD-PO, USEPA, Region 10

THRU: Alexander Whitman, Program Manager, E & E, Seattle

FROM: Lyle Diediker, CPG, Site Manager, E & E, Seattle

SUBJ: Colbert Landfill

REF: Contract Number 68-W9-0020
Work Assignment Number 20-05-0P15

CC: Sue McCarty, USEPA, Region 10
Joanne Labaw, USEPA, Region 10
Gary Sink, USEPA, Region 10
Doug Frazer, USEPA, Region 10
Site File

Ecology and Environment, Inc. (E & E) conducted a site visit to Colbert Landfill on December 18 and 19, 1990, to collect split samples during a treatability study under the Phase I pilot study being performed by Landau Associates, Inc. (Landau). The results of the samples collected by E & E are provided herein. Data validation packages were submitted under separate cover.

Table 1 provides a summary of the sampling results for volatile organic and inorganic analyses. The volatile organic results presented were obtained from split samples; however, according to Landau their splits were not analyzed, therefore, no comparison is presented. Inorganic and semivolatile results presented are from samples collected independently by E & E.

Table 1 also compares the sampling results to the evaluation criteria in the action plan of the Colbert Landfill consent decree. The effluent sample and sample duplicate, collected from location ER-A (which represents treated water), contain the lowest contaminant concentrations, as expected. However, methylene chloride evaluation criteria are still exceeded for these samples. Note that the quantitation limits for 1,1-dichloroethene, trichloroethene, and tetrachloroethane for

the effluent samples exceed the evaluation criteria. Effluent sample values for 1,1-dichloroethane and 1,1,1-trichloroethane are below evaluation criteria. For the other volatile organics shown, results for at least one sample exceeded quantitation limits.

For the inorganic constituents analyzed, calcium and magnesium were detected at concentrations of 201,000 and 212,000 µg/L, respectively, in effluent samples. Constituents were detected influent in samples at similar or slightly higher concentrations. The relatively high concentrations detected may cause efficiency difficulties with the stripping tower packing material. Landau has noted a white precipitate build-up on the packing material during treatability tests.

All other inorganic constituents were detected at low levels or were not detected.

LD:rmh

Table 1

COLBERT LANDFILL SPLIT SAMPLE RESULTS
DECEMBER 18, 1990

Analyte / Tower Airflow (CFM): / Location:	IN-A 1800 Influent		TM-1 Duplicate		EF-A 1800 Effluent		TM-2 Duplicate		T10-A 1800 Tower-10ft		T40-A 1800 Tower-40 ft		TM-4 Duplicate		Evaluation Criteria (ppb)[a]
Volatile Organics															
Chloromethane	250	U	250	U	10	U	10	U	10	U	200	U	200	U	
Methylene Chloride	3,000		3,200		39		40		66		3,100		2,900		25
1,1-Dichloroethene	340		360		10	U	10	U	10	U	280		260		7
1,1-Dichlorethane	91	J	94	J	10	U	10	U	10	U	82	J	77	J	4,050
2-Butanone	250	U	250	U	10	U	10	U	5	J	200	U	200	U	
1,1,1-Trichlorethane	2,500		2,500		4	J	4	J	8	J	1,900		1,900		200
Trichloroethene	140	J	130	J	10	U	10	U	10	U	99	J	120	J	5
Tetrachloroethene	250	U	250	U	10	U	10	U	10	U	200	U	200	U	7
Phenol	10	U	10	U	3	J	2	J	---		---		---		
Di-n-butylphthalate	0.4	J	0.4	J	0.3	J	0.4	J	---		---		---		
bis(2-ethylexyl)phthalate	10	U	47		10	U	9	J	---		---		---		
Methoxychlor	0.05	U	0.059	NJ4	0.05	U	0.05	U	---		---		---		
TCLInorganic															
Arsenic	3.10	J	3.0	U	3.0	U	3.0	U	---		---		---		
Barium	431		439		419		429		---		---		---		
Calcium	204,000		207,000		198,000		201,000		---		---		---		
Iron	54.60	J	50.60	J	37.70	J	48.60	J	---		---		---		
Magnesium	72,000		73,100		71,200		72,100		---		---		---		
Potassium	8,840		6,790		6,920		6,840		---		---		---		
Sodium	7,030		7,330		6,900		7,020		---		---		---		
Vanadium	4.00	U	4.00	U	4.00	U	5.20	U	---		---		---		
Zinc	96.90		99.60		55.50		159		---		---		---		

U - The material was analyzed for, but was not detected. The associated numerical value is a contractual quantitation limit, adjusted for sample weight/sample volume, extraction volume, percent solids, and sample dilution.

J - The analyte was analyzed for and was positively identified, but the associated numerical value may not be consistent with the amount actually present in the environmental sample. The data should be seriously considered for decision-making and are usable for many purposes.

--- Not analyzed.

(a) - From Table IV-2, Scope of Work for Remedial Action to Address Groundwater Contamination Emanating from Colbert Landfill, September 27, 1988, Appendix B of Consent Decree.

TCL - Target Compound List.

Note: The six constituents of concern identified in the Consent Decree are underlined.